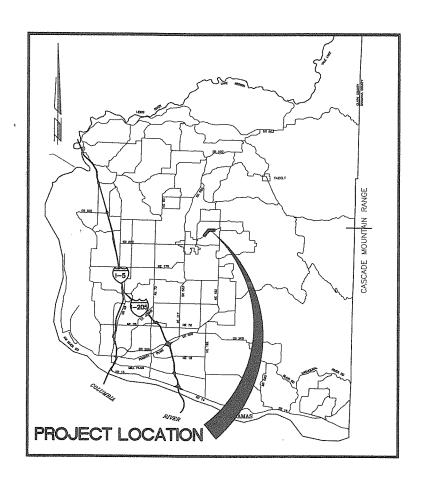
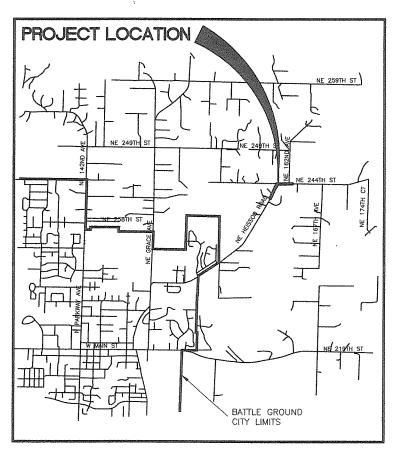
# NE HEISSON ROAD

AND NE 244TH STREET INTERSECTION

PLANS FOR THE CONSTRUCTION OF ROADWAY AND STORM DRAINAGE





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### COMMISSIONERS:

MARC BOLDT, Chair STEVE STUART, Commissioner BETTY SUE MORRIS, Commissioner



DEPARTMENT OF PUBLIC WORKS

Fed. Aid No. STPR-J065(001)



Quality Assurance	Project Manager	PW Director/ County Engineer	
TM A D 6-30-06  Bruce Klug, P.E.	Bos K. Andrews 1/31/06 Don Andrews, P.L.S.	PETEL CARRY 6/30/06 Peter Capell, P.E.	

ENG #2006-00071



Recommended for Approval

Grading 4/61/ 6-15-06 Erosion 4/64/5-06

Storm Water Plan W(N) 6-15-06

ENGINEERING PROGRAM - DESIGN SECTION

#### **LEGEND**

	ROW LINE  NEW EDGE OF PAVEMENT  NEW CURB FACE LINE  NEW CURB BACK LINE  NEW SIDEWALK  NEW CENTER LINE  NEW FENCE LINE  NEW STORM DRAIN OR CULVERT  NEW FILL LIMITS
	NEW CUT LIMITS SAWCUT LINE PERMANENT SLOPE EASEMENT NEW SILT FENCE
X X X X X X X X X X X X X X X X X X X	EXISTING EDGE OF PAVEMENT EXISTING CURB LINE EXISTING CENTER LINE EXISTING FENCE LINE EXISTING TELEPHONE LINE EXISTING WATER LINE EXISTING UNDERGROUND ELECTRIC EXISTING SANITARY SEWER LINE EXISTING STORM DRAINAGE EXISTING GAS LINE
	EXISTING CULVERT EXISTING DITCH CENTER LINE EXISTING GUARDRAIL

#### SYMBOLS

-	STRIBOLO					
m	NEW CATCH BASIN (CB)		EXISTING CURB INLET (CI) EXISTING CATCH BASIN (CB)			
	NEW MANHOLE (MH)	$\odot$	EXISTING STORM MH			
O	NEW CURB INLET (CI)	ŏ	EXISTING MISC MH			
	NEW COMBINATION CURB INLET (CCI)	*	EXISTING SHRUB			
	, ,	黨	EXISTING CONIFEROUS TREE			
Bi <sub>NB</sub>	NEW MAIL BOX	앉	EXISTING DECIDUOUS TREE			
100	NEW HANDICAP RAMP	- <b>-</b> -	EXISTING SIGN			
(C100)	CURVE TABLE	$\odot$	EXISTING DECIDUOUS TREE			
₩	EXISTING TRANSFORMER		EXISTING J BOX			
$\boxtimes$	EXISTING ELEC TOWER	0	EXISTING TELEPHONE MANHOLE			
OSAN	EXISTING SANITARY SEWER MH	$\rightarrow$	EXISTING TELEPHONE POLE			
a	EXISTING FIRE HYDRANT	₩	EXISTING LIGHT			
O <sub>CL</sub>	EXISTING CLEAN OUT	G	EXISTING GUY ANCHOR			
	EXISTING GAS VALVE	-0-	EXISTING POWER POLE			
$\Theta$	EXISTING WATER METER	-				
-₩-	EXISTING WATER VALVE	□r <sub>mb</sub>	EXISTING MAIL BOX			
¤	EXISTING SIGNAL POLE		EXISTING TELEPHONE PEDESTAL			
	EXISTING TELEPHONE VAULT	$\odot$	EXISTING SPRINKLER HEAD			
tv	EXISTING TELEVISION BOX	$\triangle$	TRAVERSE POINT			
<b>②</b>	EXISTING WELL	$\otimes$	TEST HOLE			
uu	EXISTING BRUSH LINE					
X3GGGG	EXISTING HEDGE					

### **GENERAL NOTES**

- 1. SURVEY DATUM PER CLARK COUNTY.
- 2. EXISTING UTILITIES SHOWN ON THE PLANS ARE PER SURFACE LOCATIONS, RECORD DRAWINGS, AND LIMITED POTHOLE DATA. THE CONTRACTOR SHALL FIELD VERIFY POHIULE DATA. THE CONTRACTOR SHALL FIELD VERIFY
  LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO
  CONSTRUCTION. IF CONFLICT EXISTS, NOTIFY THE ENGINEER
  AND UTILITY COMPANY. PROCEED ONLY AS DIRECTED AND
  PER STANDARD POLICY AND REGULATIONS (INCIDENTAL TO STORM SEWER PIPE).
- 3. ALL NECESSARY CONSTRUCTION SURVEY SHALL BE PROVIDED AT NO COST TO THE CONTRACTOR. HOWEVER, THE CONTRACTOR WILL BE RESPONSIBLE FOR REPLACING NEEDED SURVEY STAKES DESTROYED THROUGH NORMAL OPERATIONS, NEGLIGENCE, OR INATTENTION.
- 4. AT THE END OF EACH DAY, THE CONTRACTOR SHALL CLEAN UP THE PROJECT AREA AND LEAVE IT IN A NEAT AND SECURED MANNER. UPON COMPLETION, THE CONTRACTOR SHALL LEAVE THE PROJECT AREA FREE OF DEBRIS AND UNUSED MATERIAL.
- 5. CONTRACTOR SHALL COORDINATE UTILITY RELOCATIONS WITH CLARK PUBLIC UTILITIES FOR POWER AND WATER, QWEST FOR TELEPHONE, NW NATURAL FOR GAS, COMCAST FOR CABLE TV.
- 6. CONTRACTOR SHALL PROTECT EXISTING WATER SERVICE LINES. ALL DISTURBED WATER SERVICE LINES SHALL BE REPAIRED AS DIRECTED. ALL RELOCATED METERS WILL BE RESET IN ACCORDANCE WITH CLARK PUBLIC UTILITIES STANDARDS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF EXISTING WATER SERVICE LINES DESTROYED THROUGH NEGLIGENCE AND/OR INATTENTION.
- 7. CONTRACTOR SHALL MAINTAIN INGRESS AND EGRESS FROM ALL PRIVATE PROPERTY DRIVEWAYS DURING CONSTRUCTION.

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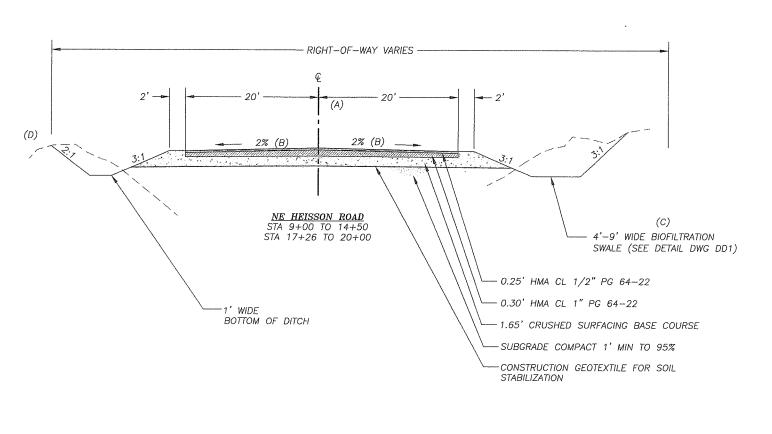
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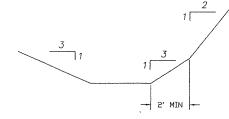
LEGENDS

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Fed. Aid No. STPR-J065(001)





SWALE SECTION STA 14+50 TO 18+00 (RT)

VARIES (B) VARIES (B) HMA MEDIAN SLOPE VARIES NE HEISSON ROAD 4'-9' WIDE BIOFILTRATION SWALE (SEE DETAIL DWG DD1) - 0.25' HMA CL 1/2" PG 64-22 - 0.30' HMA CL 1" PG 64-22 -1.65' CRUSHED SURFACING BASE COURSE -SUBGRADE COMPACT 1' MIN TO 95% -CONSTRUCTION GEOTEXTILE FOR SOIL STABILIZATION

- RIGHT-OF-WAY VARIES

NOTES:
(A) LEFT: WIDEN FROM ± 10.4' LT. AT STA 9+00 TO 20' LT. AT STA 10+18.

> TAPER FROM 20' LT. AT STA 19+50 TO ±10.8' LT. AT STA 20+00.

RIGHT: WIDEN FROM ± 10.4 RT. AT STA 9+00 TO 20' RT. AT STA 9+40.

TAPER FROM 20' RT. AT STA 19+00 TO ±11.3' RT. AT STA 20+00.

- (B) SLOPE VARIES. SEE SUPERELEVATION DIAGRAM ON DWGS PP1-PP3.
- (C) SWALE (RT) ENDS WITH 2' WIDTH AT 18+00
- (D) SLOPE OUT OF DITCH BECOMES 4:1 FROM STA 17+26 TO STA 18+00 (SEE 244TH SECTION ON DWG TS2)

- DRIVEWAYS AND THE HMA MEDIAN SHALL BE CONSTRUCTED TO THE FOLLOWING SECTION: 0.25' HMA CL 1/2" PG 64-22 0.75' CRUSHED SURFACING BASE COURSE - ADD 3" MINIMUM TOPSOIL TYPE A TO ALL NEW CUT AND FILL SLOPES.

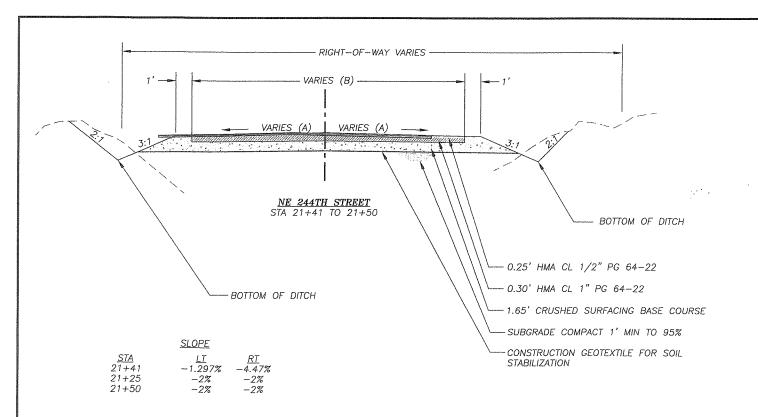
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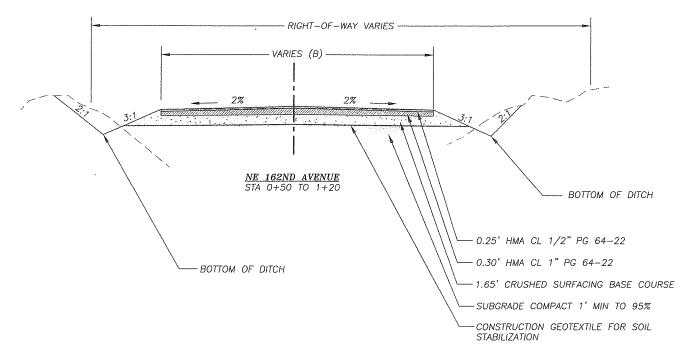
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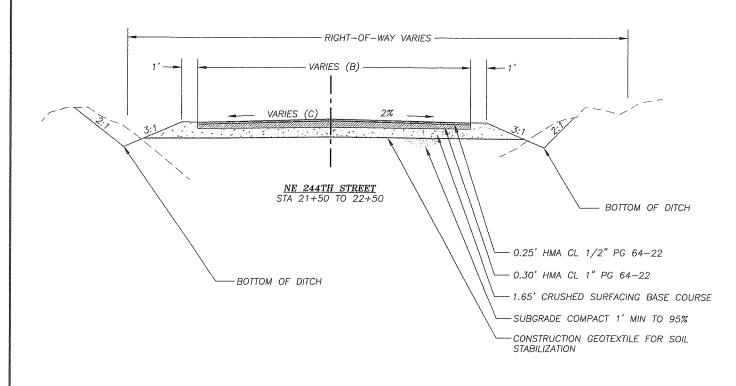
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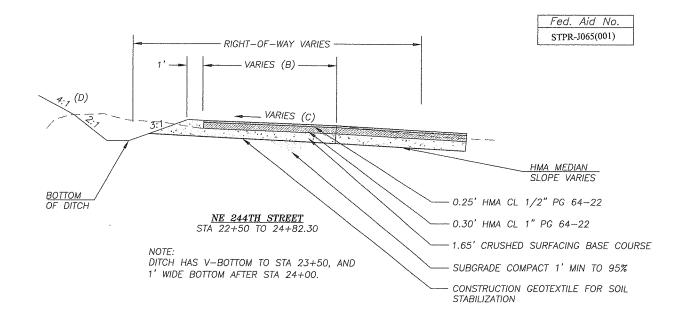
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NOTE:
- DRIVEWAYS AND THE HMA MEDIAN SHALL BE CONSTRUCTED TO THE FOLLOWING

0.25' HMA CL 1/2" PG 64-22 0.75' CRUSHED SURFACING BASE COURSE

- ADD 3" MINIMUM TOPSOIL TYPE A TO ALL NEW CUT AND FILL SLOPES.

(A) CROSS SLOPE VARIES FROM STA 20+41 TO 21+25.

(B) ROADWAY WIDTHS AND TAPERS SHOWN ON DWGS PP1-PP5.

(C) SLOPE VARIES. SEE SUPERELEVATION DIÁGRAM ON DWG PP4.

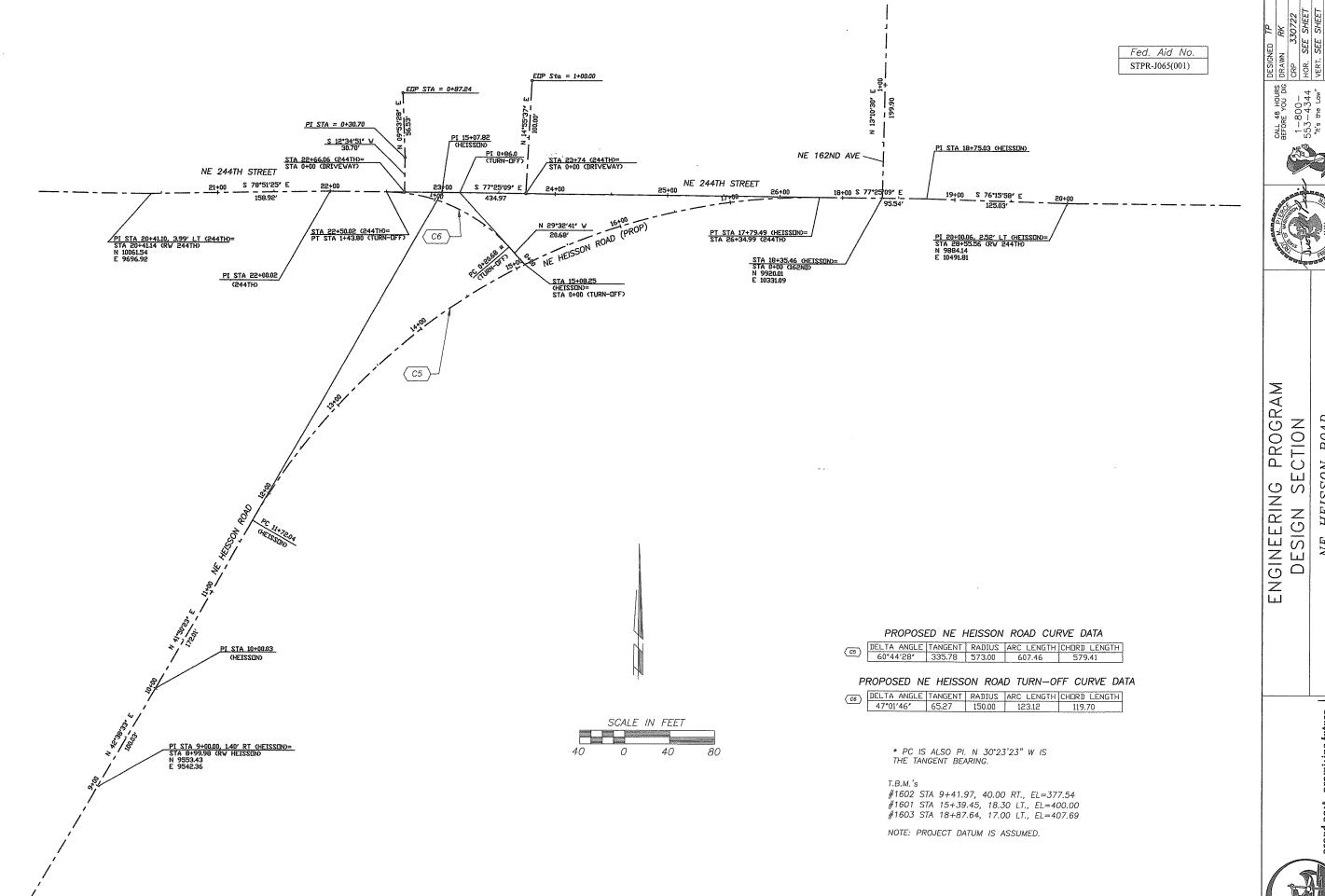
(D) 4:1 SLOPE BEGINS AT BACK OF EASEMENT SHOWN ON PP SHEETS

PROGRAM:CTION GINEERING DESIGN SE Ž

SSON ROAD SECTIONS

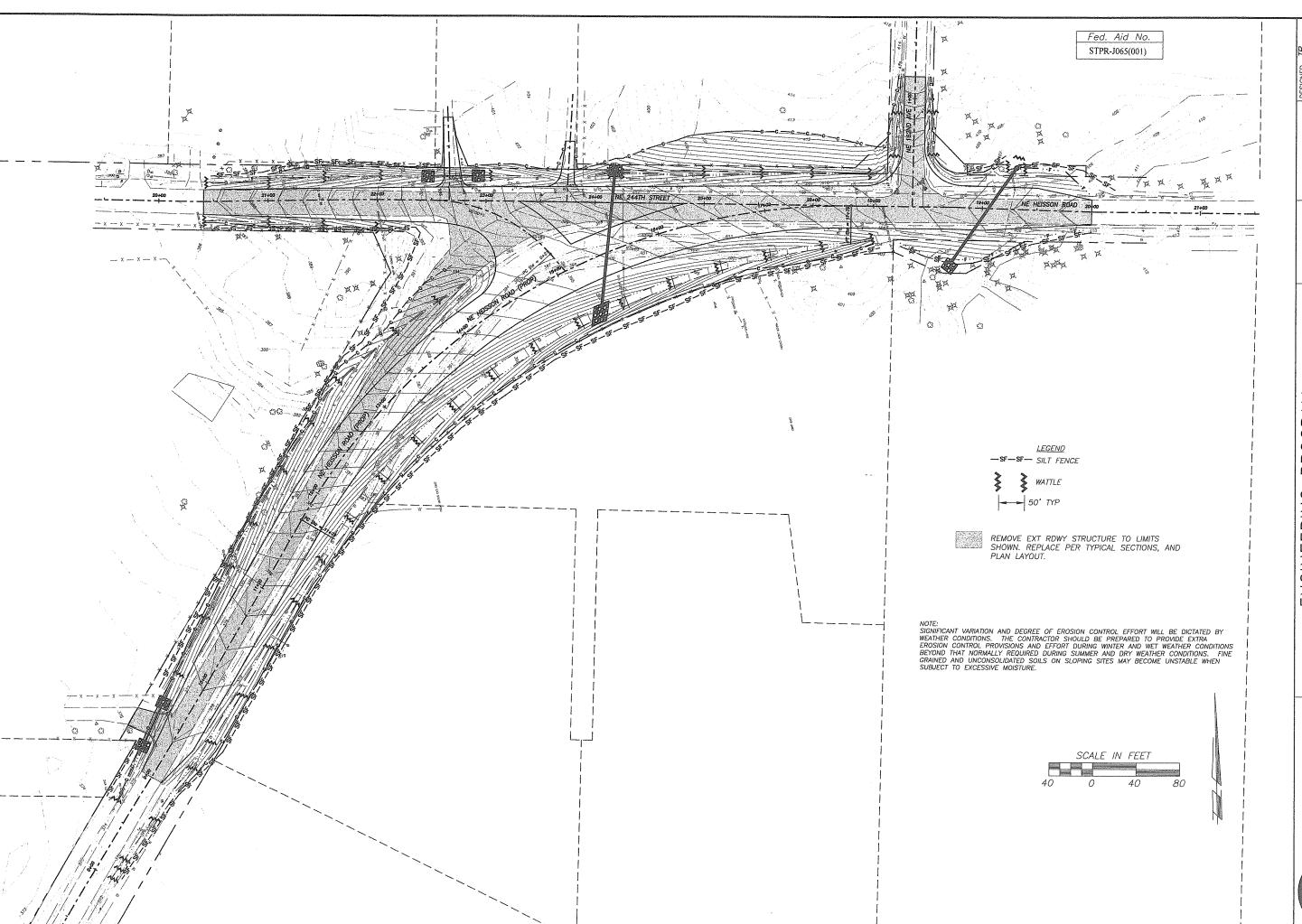
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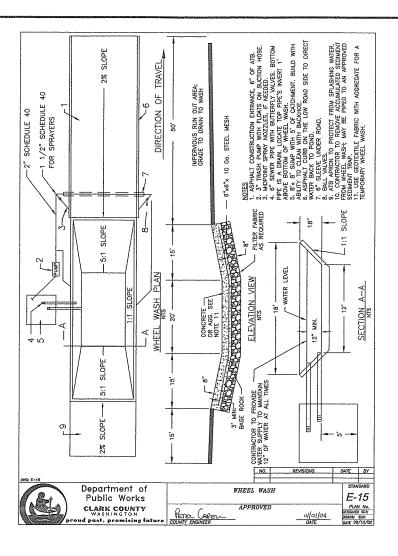
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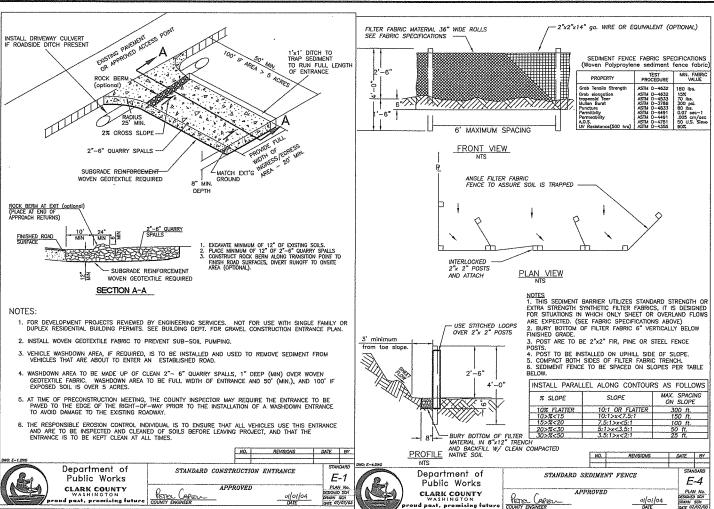
HEISSON ROAD OL AND ROADWAY ENGINEERING DESIGN SE NE

REMOVAL

CONTROL

EROSION





#### STANDARD NOTES FOR EROSION CONTROL PLAN

- 1. The Contractor shall install and maintain BMP's as shown and perform all actions necessary to prevent erosion, and control sediment from leaving the construction site Site Contractor shall comply with Clark County Code Chapter 40.380.050.
- 2. All erosion control measures shall be in-place and in working condition prior to disturbing and exposing any soil surfaces (i.e. silt fence, construction entrance, sedimentation barriers, sedimentation traps).
- 3. All erosion prevention and control BMP's shall be maintained and repaired as needed to insure continued performance of their intended function. Needed renairs shall be made as soon as practicable. They are to remain in place and operational during all phases of construction. Construction activities shall not continue or resume until repairs to erosion control facilities are made and the facilities are functional. Any sediment leaving the site or discharging to a sensitive area shall be stopped and controlled immediately. Contaminated areas shall be cleaned and restored.
- 4. Clearing limits and work area limits shall be delineated and marked. Do not disturb more area than needed for construction requirements,
- All sensitive or critical areas (wetlands, steep slopes, natural waterways), and buffers shall all be clearly delineated and clearly marked, and protected from sediment deposition 6. Sediment laden runoff shall be prevented from entering all existing storm water catch
- 7. No exposed, bare soils shall remain unstabilized for more than two days during the period October 1 thru April 30 or for more than seven days during the period of through September 30. All disturbed soil surfaces shall be stabilized by a suitable application of "Best Management Practices"
- 3. Where feasible, no more than 500 feet of trench shall be open at one time. Excavated material shall be placed on the up-hill side of trenches provided it does not conflict with safety requirements.
- 9. Dewatering devices shall discharge into a sediment trap or sediment pond. No discharge shall be made to a paved street or stormwater collection system without first removina sediment.
- 10. Cut and fill slopes shall be constructed in a manner that will minimize erosion.

  Erosion shall be controlled and prevented by such measures as roughening the surface, installation of interceptor ditches, terracing, covering with matting, mulch or plastic sheeting.

  Runoff shall be prevented from entering a slope and from undercutting the base
- 11. Any soil or debris transported onto roadways and sidewalks shall be removed. Deposits shall be completely removed by shoveling and/or sweeping. Washing shall not be utilized unless specifically approved in writing by the County.
- 12. All permanent infiltration systems shall be isolated and protected from sediment lader runoff entering to avoid risk of reducing the ability of the systems to infiltrate. Isolation and protection shall not be removed until the drainage area tributary to the system is



TANDARD NOTES FOR EROSION CONTROL PLAN (CONTINUED 13. All conveyance channels, both temporary and permanent shall be stabilized to prevent erosion of the channel. Stabilization shall extend to areas at outlets and downstream reaches vulnerable to erosion resulting from flow discharging from the char

- 14. If BMP's shown are utilized but are insufficient to prevent sediment from reaching water bodies, adjacent properties, or public rights-of-way; additional BMP's shall be implemented immediately to prevent further encroachment of sediment.
- 15. Stabilized areas shall be provided for employee parking and storage of construction materials. Erodeable stockpiles of earthen materials, such as topsoil, silty and clayey soils; and landscape materials, shall be covered when not being incorporated in the work. Erosion control BMP's shall be utilized as necessary to prevent sediment laden runoff from leaving or sediment being transported from these areas from vehicle activity
- 16. All pollutants other than sediment that occur during construction shall be handled and disposed of in a manner that does not cause contamination of storm water.
- 17. The Contractor shall keep an inspection log of the condition of the erosion control facilities. Erosion control facilities shall be inspected at least weekly and after each rainfall. The inspection log shall be kept at the project site at a designated location and shall be available for review by the County. An individual that has successfully completed the County's Erosion Control Certification course shall perform inspections and maintain the
- 18. All temporary BMP's shall be removed within 30 days after final site stabilization is achieved. Trapped sediment shall be deposited and stabilized on site. Areas disturbed resulting from removal shall be permanently stabilized.
- 19. Construction shall not be considered complete and acceptable until all disturbed soil surfaces have been protected from erosion with permanent landscaping, covering with impervious surfaces, restored to original undisturbed condition or permanently stabilized.
- 20. Vegetated stabilization and landscaping shall be fertilized, watered and maintained to insure that growth of vegetation is established and sustained.
- 21. During dry weather construction periods the contractor shall provide project—specific dust control measures that may include: Seeding, Mulching, Matting, Water, Tackifier, or Chemical Soil Stabilizers. The contractor shall maintain the dust control measures through dry weather periods until all disturbed areas have been stabilized. Immediately re-stabilize areas disturbed by contractor's operations or other activities (wind, water, vandalism, etc.).
- 22. Entry onto the construction site shall be restricted to a single approved entrance as
- 23. Maintenance and repair of heavy equipment and vehicles which involve potential contaminants (oil,solvents,hydraulic fluid, etc.) must be conducted in a manner which prevents contamination of soils, surface water and ground water. Tarps, drip pans, or other appropriate measures shall be used as necess
- 24. Stripping, topsoil, and unsuitable material stockpiles shall be hydroseeded with "regreen



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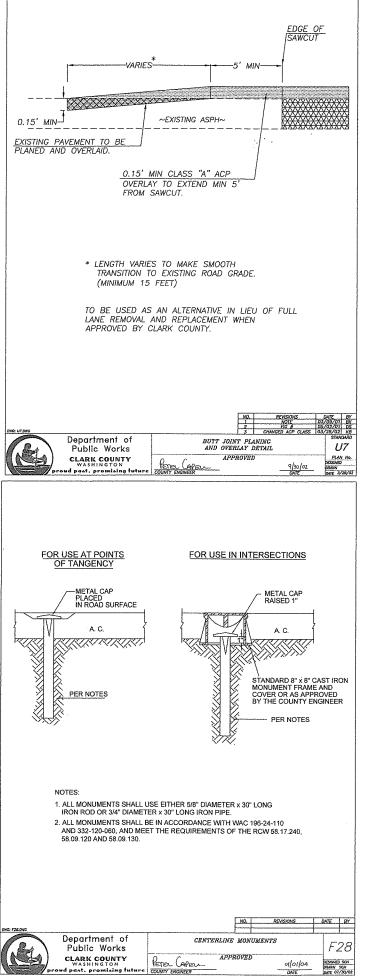
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#### OPEN CUT UTILITY TRENCH BACKFILL DETAIL (COLLECTOR OR ARTERIAL)

### SURFACING: 1. All AC.P. shall be saw cut to provide a straight, cledn edge prior to paving. 2. The cut line shall be one continuous straight line from the outer excavation limits of manhole, valve box, etc. to manhole, valve box, etc. 3. Pove with on 0.5 ft. minimum compacted depth AC.P., or match existing or design

- section, whichever is greater.
- section, whichever is greater.

  1. Lifts for A.C.P. (Class A) shall be 0.15 ft. minimum and 0.35 ft. maximum for non-surface lifts (0.25' maximum for surface lift); the temperature shall be 250 degree minimum, 350 degree maximum, compacted to 92% of the theoretical maximum.

  5. All joints shall be tacked, sealed and sanded.

  6. Trench shall be ploted until proved.

  7. For longitudinal installation, full lane width including turn lanes restoration shall be required or as directed by Clark County. For transverse installation refer to surfacing restoration of detail US. See Section 12.20A.120.C.

#### BASE COURSE:

- i. 0.80 ft. minimum depth (1-1/4" minus) C.S.B.C. (W.S.D.O.T. approved material).
  Compacted to 95% of maximum density. See trench zone.
  Equivalent depth of A.T.B. may be substituted.
  For transverse or diagonal trenches in existing roadway povement, CDF (as defined in the standard specifications section 2-09.3(1)E) will be used for a minimum of 3" in depth or from 6" above the top of the pipe to the bottom of full povement section which ever is less.

#### TRENCH ZONE:

PIPE ZONE:

- 10. Graulot backfill as approved by local agency or W.S.D.O.T. specifications for granular backfill. Compacted to 95% of moximum density in the trench zone using Method C compaction as per Section 2—03.3(14)C.

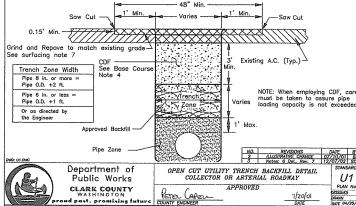
  2. Native material may as used if approved prior to construction by Clark County.

  3. Trench zone width see below.

Pipe zone material as specified by utility owner, and shall conform to section 9-03.12(3) WSDOT Specs.
 1.0 ft. max. from top of the pipe. 6" from top of pipe when CDF backfill used.

#### CONDITIONS:

- 1. A copy of the permit and requirements shall be on the job site at all times.
  2. The permit holder shall be responsible for all restoration and maintenance of ditches, shoulders, drivencys, landscaping, etc.
  3. Call Clark County at 397—2446 twenty-four hours prior to commencing work.



#### ROADWAY SHOULDER INCLUDES LAWN AND LANDSCAPE

#### SHOULDER ROCK:

- 0.50 ft. minimum depth (1 1/4" minus) crushed rock. (Clark County Approved Material).
   Compacted to 95% of moximum density. See trench zone.
   Rock shall extend from E.O.P. to the back of trench of approx. .05 ft./ft. slope.

#### LAWN & LANDSCAPE AREAS:

A County approved top soil shall be placed 0.50 Ft. in depth.
 Area to be restored to match existing.

#### TRENCH ZONE:

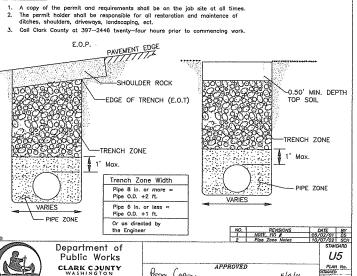
Where the distance from E.O.T. to E.O.P. is less than or equal to the depth of the trench; these conditions shall apply:

- Granular backfill as approved by local agency or W.S.D.O.T. specifications for granular backfill. Compacted to 95% of maximum density in the trench zone using Method C compaction as per Section 2-03.3 (14)C.
- Native material may be used if approved prior to construction.
- 4. Shoulder rock or landscaped sections as applicable

#### PIPE ZONE:

Pipe zone material as specified by utility owner, and shall conform to section 9-03.12(3) WSDOT Specs.
 1.0 ft. max. from top of the pipe.

#### CONDITIONS:



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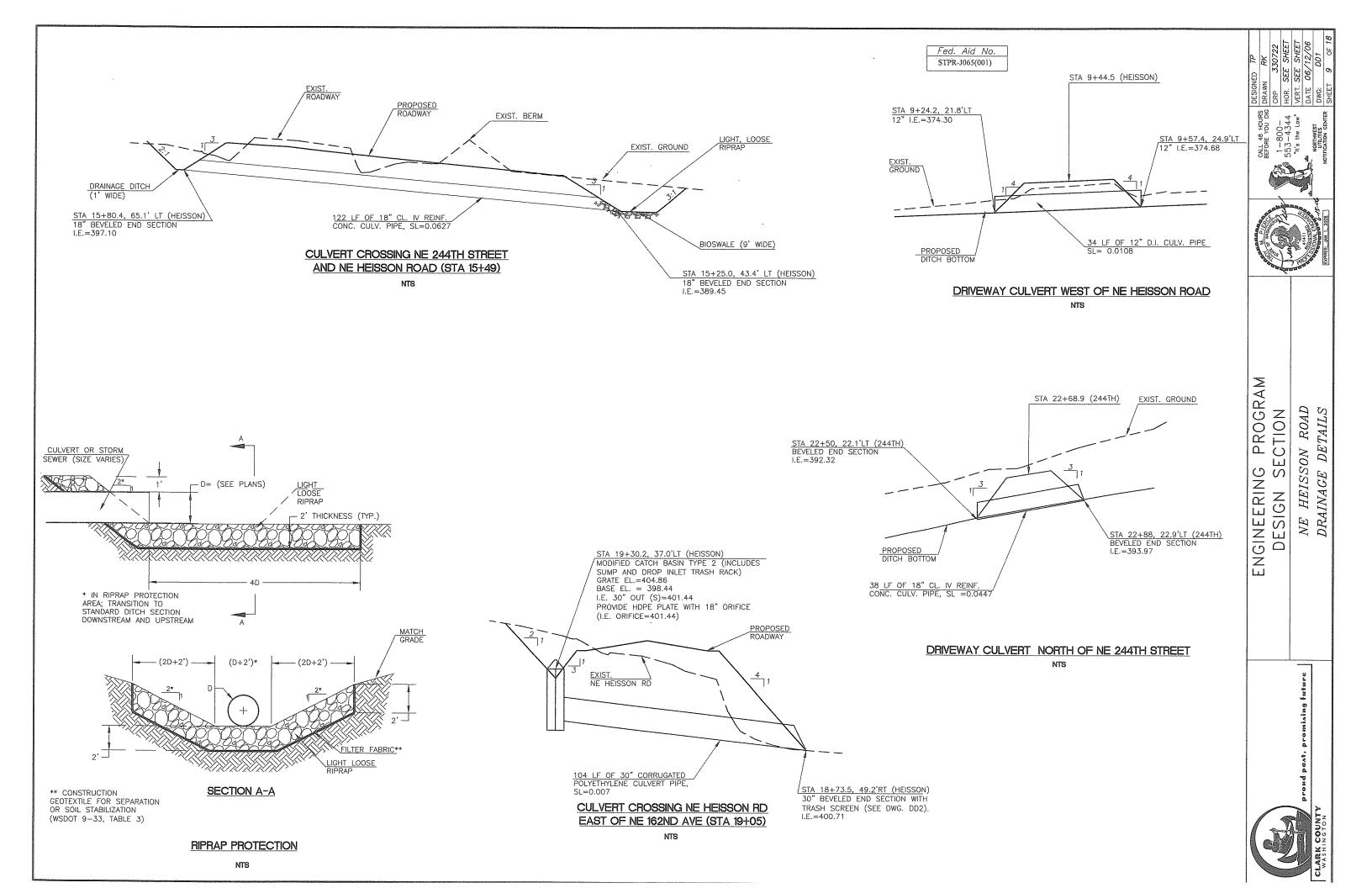
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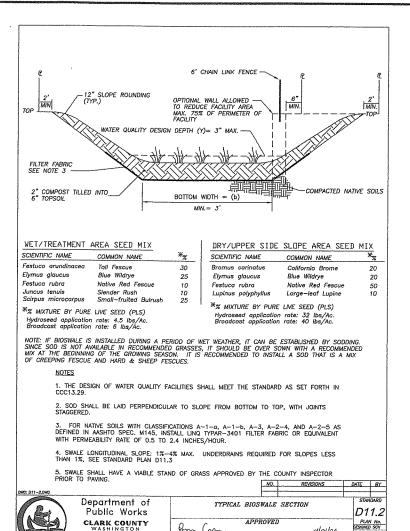
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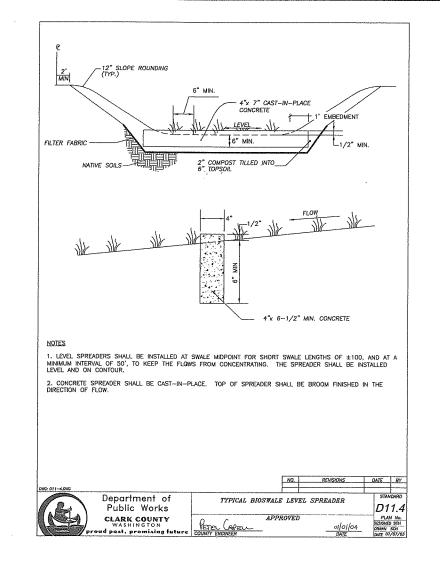
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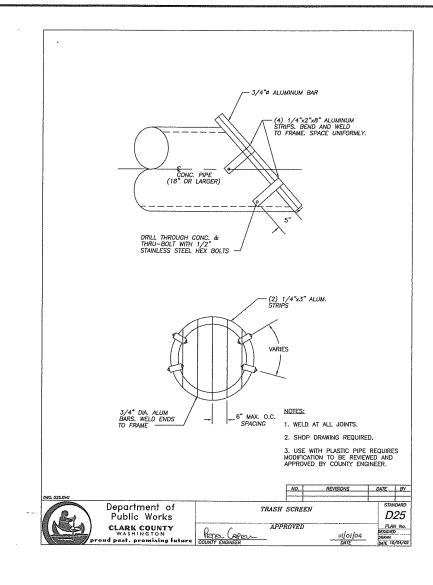


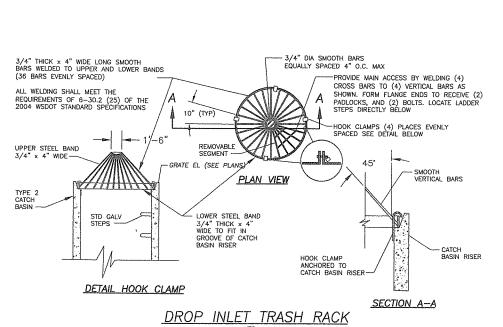


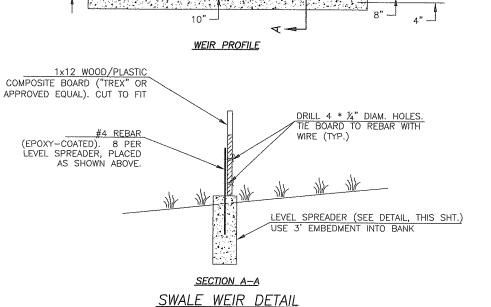




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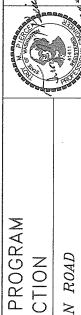


& SWALE

FORM WEIR CONTROL SECTION AS SHOWN (3 OPENINGS PER

LEVEL SPREADER)

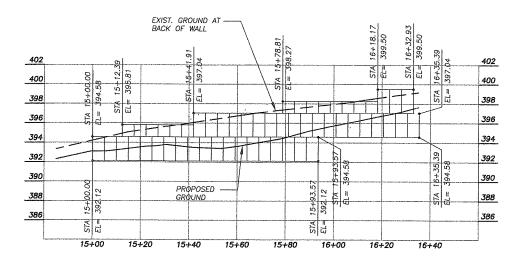
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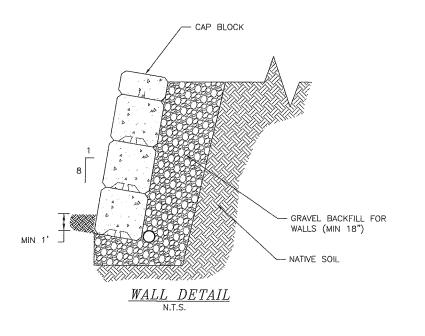


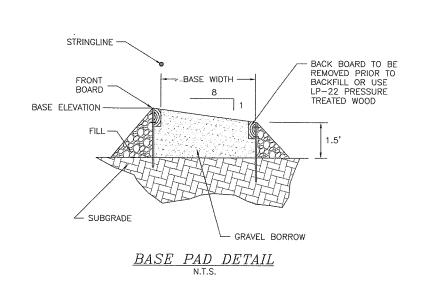
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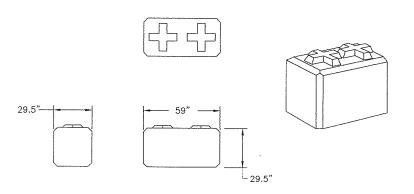
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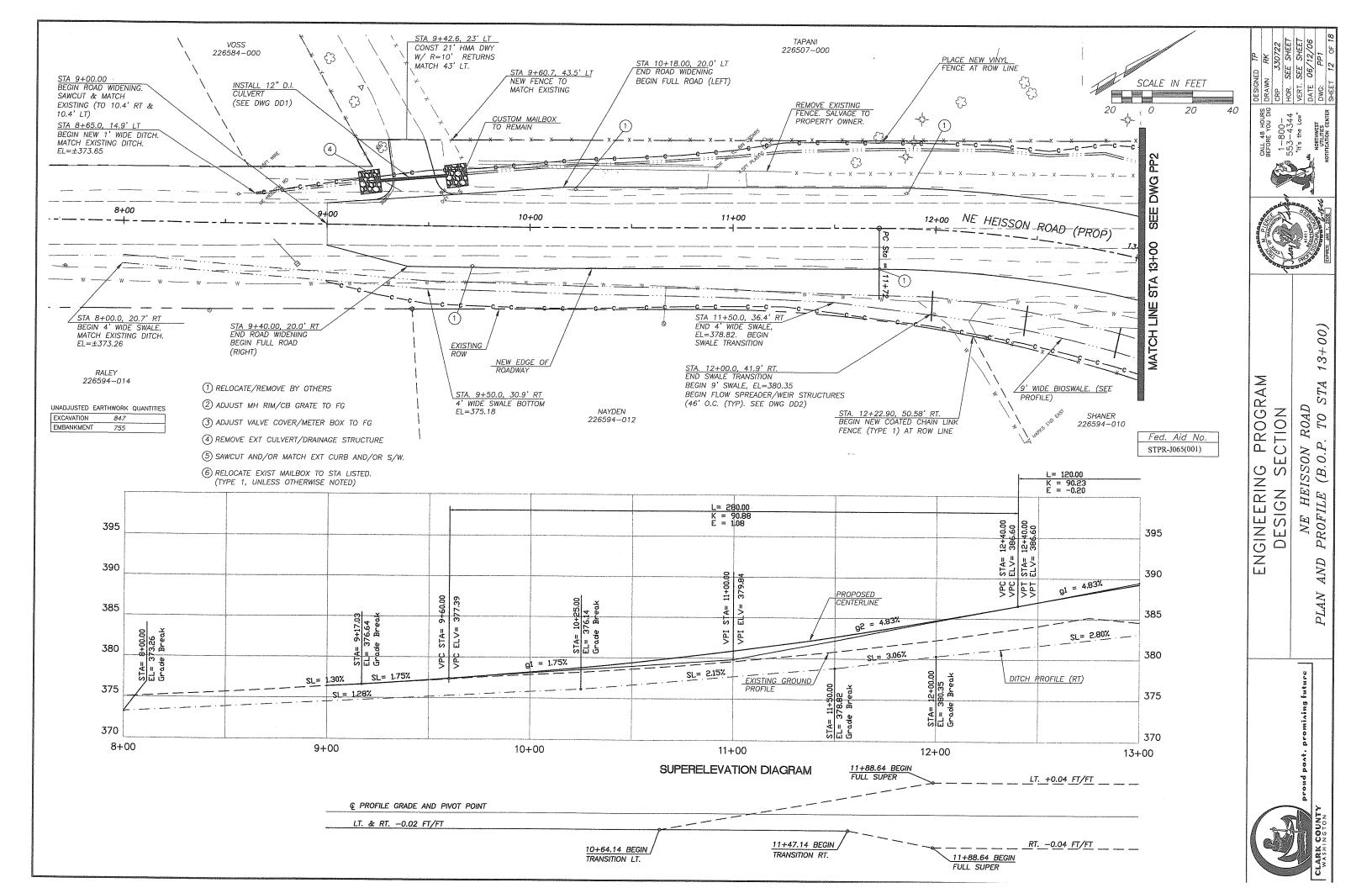
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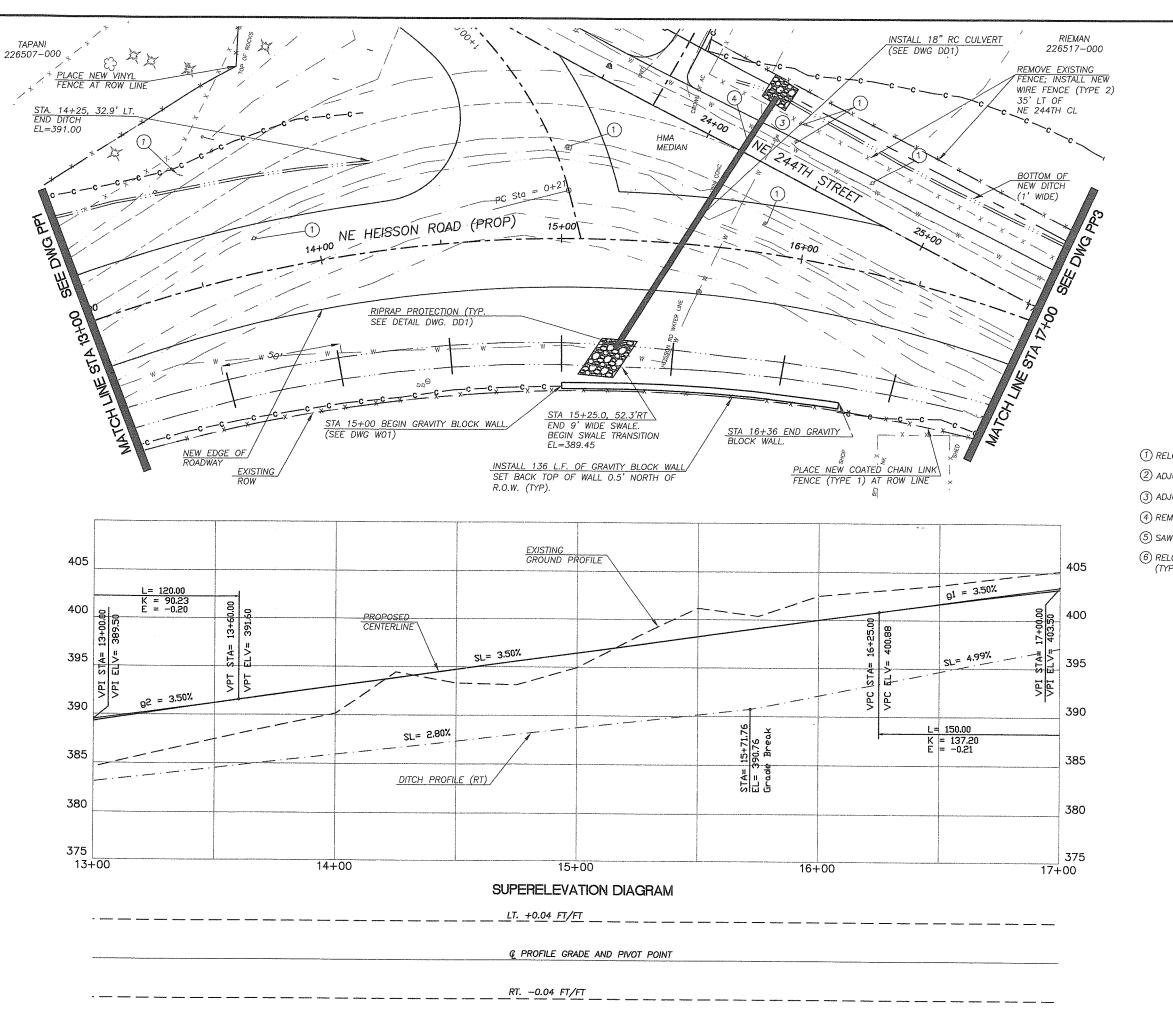
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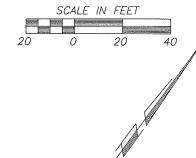
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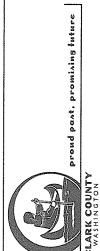


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HEISSON ONLY

- 1) RELOCATE/REMOVE BY OTHERS
- ② ADJUST MH RIM/CB GRATE TO FG
- (3) ADJUST VALVE COVER/METER BOX TO FG
- 4 REMOVE EXT CULVERT/DRAINAGE STRUCTURE
- 5 SAWCUT AND/OR MATCH EXT CURB AND/OR S/W.
- (6) RELOCATE EXIST MAILBOX TO STA LISTED. (TYPE 1, UNLESS OTHERWISE NOTED)

Fed. Aid No. STPR-J065(001)



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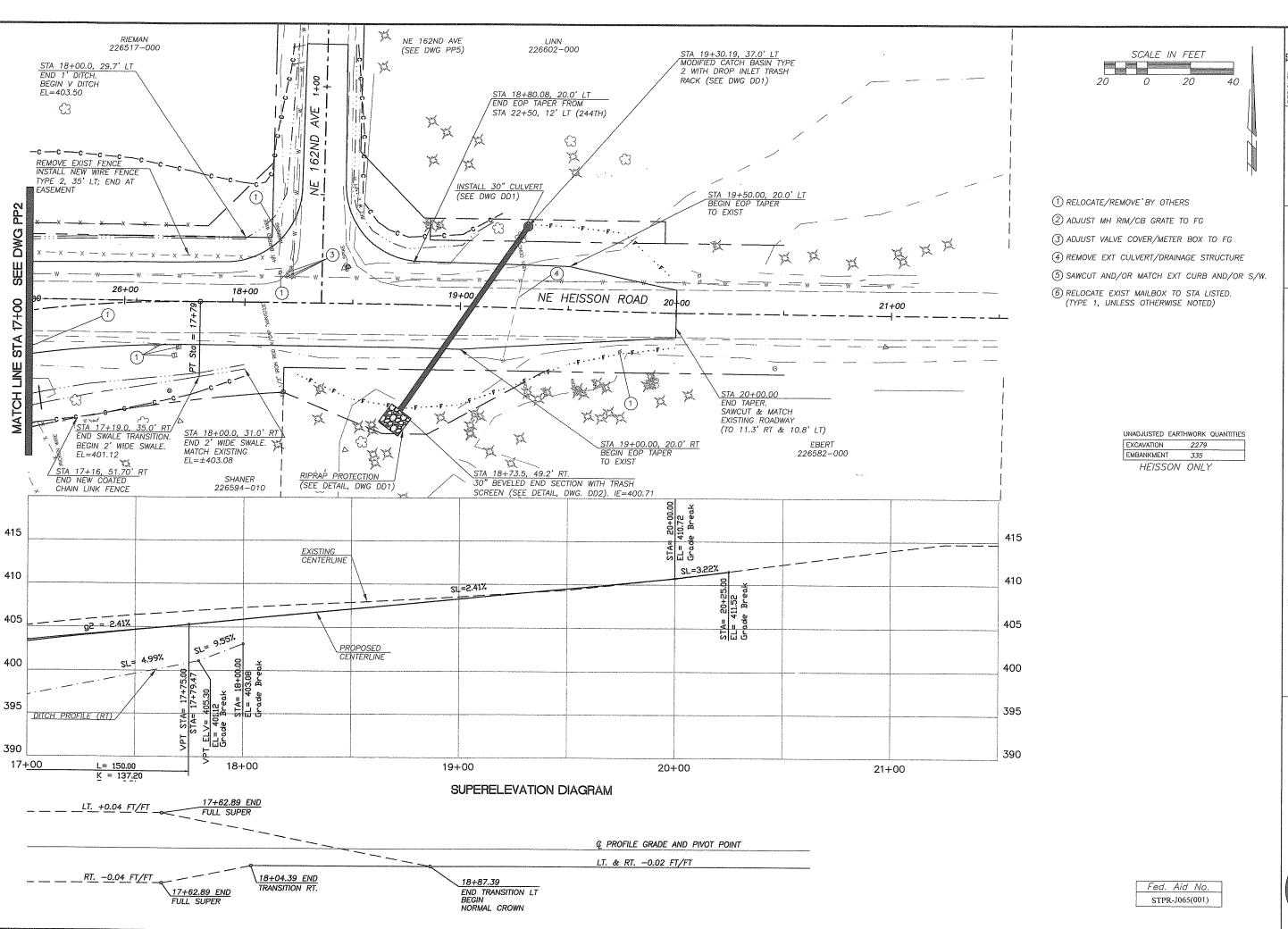
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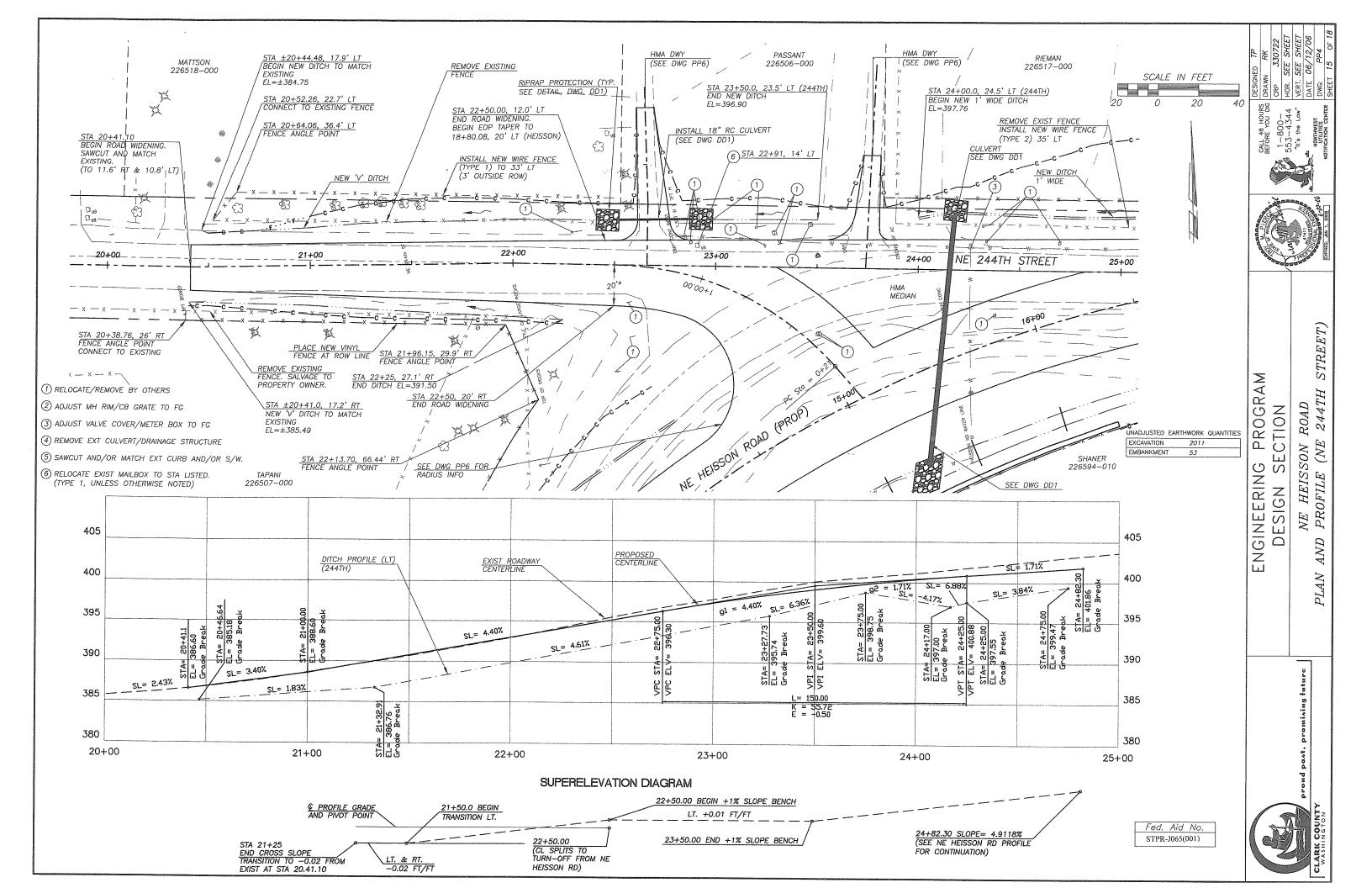
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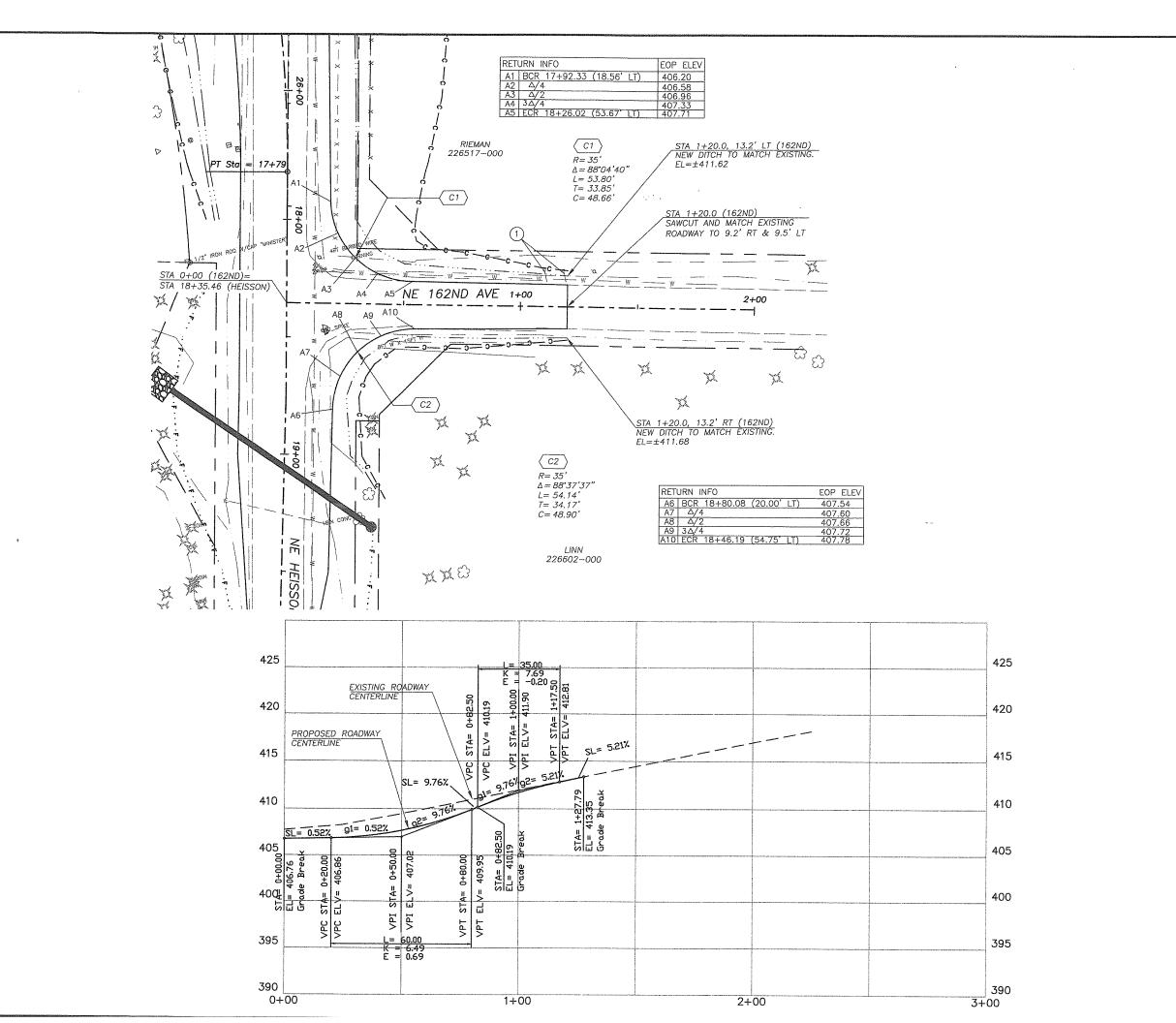
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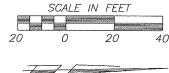
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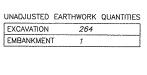
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proud past, promising future











CALL 48 HOURS BEFORE YOU DIG 1-800-553-4344 "It's the Law"

AVE

ROAD VE 162ND

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